

ON AUSTRALIAN COLEOPTERA. PART I.

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(One Text-figure.)

[Read 24th September, 1947.]

INTRODUCTION.

This paper contains the results of an attempted study of the Australian species of the families Lagriidae and Pedilidae, which could not be completed owing to the reluctance or inability of several museums to send material on loan under wartime conditions. In the case of the genus *Ictistygna*, it would be necessary to examine the types, nearly all of which are not in Australia, to reach any finality. It was therefore necessary to return the C.S.I.R. collection, which contained the bulk of the material available to me, to Canberra, and postpone a complete revision of these families. The Ictistyginae of the Lagriidae greatly resemble the Pedilidae, but may be recognized by the closed fore coxal cavities. My thanks are due, amongst others, to Mr. K. C. McKeown and the entomologists of the C.S.I.R.

The second section consists of notes and observations on species belonging to various other families.

SECTION 1.

Family LAGRIIDAE.

Borchmann dealt with the classification of this family very fully on a world basis in 1936 (*Genera Insectorum*). For the benefit of Australian students, the five genera represented in this country may be readily distinguished as follows:

Key to Australian Genera.

1. Elytra wide, expanding considerably to about apical third; body obese. (Elytra confusedly and in some species rugosely punctate.) 2
 Elytra much narrower, but little, or not at all, expanded behind the shoulders; body normal or narrow 3
2. ♂ with antennae not at all serrate *Lagria* F.
 ♂ with 9th and 10th antennal joints conspicuously and sharply serrate .. *Ecnolagria* Borchm.
3. Elytra striate punctate; form Cistelid-like *Synatractus* Macl.
 Elytra confusedly punctate; form Pedilid-like 4
4. Prothorax distinctly longer than broad *Egestriomima* Champ.
 Prothorax not longer than broad. (Tibiae, especially the middle pair, denticulate or setulose externally.) *Ictistygna* Pasc.

Genus ECNOLAGRIA Borchmann.

Arch. f. Naturg., 81A (2), 1915, 49 and 139.

The following key, based on that given by Borchmann (*Gen. Ins.*, Fasc. 204, 1936, p. 141), should be of use to Australian coleopterists:

Key to the Australian species of Ecnolagria.

1. Posterior tibiae of ♂ without sexual characters, i.e., without one or more teeth on the inner margin 2
 Posterior tibiae of ♂ with one or more teeth on the inner margin 3
2. Colour dark; elytra metallic green or violet, very rugose. (Hab. W.A.)
 *aeneoviolacea* Champ.
 Colour much lighter; elytra reddish, much more finely punctate, each with two weak ribs *affinis* Bois.

3. Posterior tibiae of ♂ armed with a pronounced medial tooth on the inner margin 4
Posterior tibiae of ♂ armed with a row of teeth on the inner margin. (Colour much as in *grandis*.) 5
4. Upper surface predominantly or entirely stramineous or light reddish-brown; basal abdominal segment of ♂ acutely carinate *grandis* Gyll. (= *rufescens* Bois.)
Head and pronotum blue-black, scutellum yellowish, anterior third of elytra blue followed by a gold band then the remainder purple; posterior femora of ♂ strongly thickened and widely excavated beneath; posterior tibiae of ♂ also excavated for first third, second third, flat and triangularly widened and with a fairly long pointed tooth *aurofasciata* Borchm.
5. Posterior tibiae of ♂ coarsely toothed; first segment of abdomen carinate, second last with a tubercle on hind margin *serripes* Borchm.
Posterior tibiae of ♂ very finely toothed; first segment of abdomen not carinate *tomentosa* F. (= *pulchrivaria* Lea)

Genus EGESTRIOMIMA Champion.

Trans. Ent. Soc. Lond., 1916, Pt. 2, 183.

To date this genus has been represented by only two species, *E. albiliniata* Cart., originally described as an *Egestria* (PROC. LINN. SOC. N.S.W., 1905, p. 189), and *E. fulvipennis* Champ., described at the same time as the genus. Both these species are before me. Two more are now described. *Selenopalpus fuscus* MacL., discussed below, also very probably belongs to this genus.

The four species may be tabulated thus:

1. Clothing black or piceus patterned with ashy-white *albiliniata* Cart.
Clothing not thus 2
2. Form broader, especially the head; cuticle of elytra wholly black *carteri*, n. sp.
Form narrower; cuticle of elytra wholly or mainly testaceous 3
3. Legs and abdomen black; anterior medial depression of head stronger .. *fulvipennis* Champ.
Legs and abdomen castaneous; anterior medial depression of head not so strong *castaneiventris*, n. sp.

EGESTRIOMIMA CARTERI, n. sp.

Elongate, nitid, black, antennae, anterior tibiae and tarsi, and palpi obscurely testaceous, dorsal surface thickly clothed with stramineous depressed pubescence, patterned on each elytron with an oblique cinerescens vitta commencing at the shoulders and fading out medially just before the apex, suture also narrowly cinerescens, the whole intermixed with long semi-erect dark hairs, clothing of ventral surface cinerescens.

Head slightly longer than greatest width at eyes, basal angles rounded, sides expanding a little to eyes, medially broadly flattened, somewhat depressed in front of eyes, with variable and fairly close punctures. Antennae slender, segments gradually decreasing in length after second. Pronotum as wide as head behind eyes, a little longer than wide, subcylindrical, sides medially constricted, finely punctate, narrowly and definitely caniculate on disc. Elytra not quite twice as long as prothorax, twice as long as wide, expanding slightly for two-thirds of length, apices evenly rounded, coarsely but not very closely punctate.

Size: 8 mm. × 2.5 mm.

Hab.—N.S.W., Telegraph Point (H. J. Carter and J. Armstrong), Hastings R. (H. J. Davidson).

Type from Telegraph Pt. in Carter Coll., C.S.I.R.; paratypes in those of H. J. Davidson and the author.

The key given above should suffice to differentiate this species from the others of the genus. Of the four specimens before me, three from Telegraph Pt. on the North Coast are identical, but that from Hastings R. has all its legs fusco-testaceous. They all appear to be females.

EGESTRIOMIMA CASTANEIVENTRIS, n. sp.

Elongate, nitid, mainly castaneous, head excluding mandibles, palpi, antennae and penultimate tarsal joint black, thorax and underside with a varying amount of black, elytra testaceous but infuscate at suture on basal half of type specimen, dorsal surface thickly clothed with depressed stramineous pubescence interspersed with longer semi-erect darker hairs, clothing of underside pallid.

Head half again as long as width at eyes and almost parallel behind them, broadly flattened and somewhat depressed in front of eyes, rather closely punctate, punctures variable in size. Antennae slender, segments gradually decreasing in length after the second. Prothorax as wide as head across eyes, half as long again as wide, subcylindrical, sides medially constricted, finely punctate, obscurely caniculate on disc. Elytra not quite twice as wide as prothorax, two and a half times as long as wide, sides parallel for two-thirds length, apices evenly rounded, coarsely but not very closely punctate. Fifth ventral segment of ♂ deeply excavate down middle and deeply emarginate at apex.

Size: 10.5 mm. × 2.5 mm.

Hab.—N.S.W., Ropes Cr., Nov., 1939 (H. J. Carter), Rivertree (E. Sutton), French's Forest (H. Davidson).

Holotype from Ropes Cr. in Carter Coll., C.S.I.R., allotype and paratype in the author's coll., paratype in H. Davidson's coll.

There are four specimens before me. As stated above, the amount of black on the body varies, but is mostly concentrated on the disc of the prothorax and on the metasternum. The species is very close to *E. fulvipennis* Champ. and was so identified by H. J. Carter, but in addition to colour differences, the prothorax is less constricted at middle and the head less flattened. I have specimens of Champion's species from the Bogan and Peel Rivers, N.S.W.

Family LAGRIIDAE (Species wrongly included in Oedemeridae).

Two species described by Macleay (*Trans. Ent. Soc. N.S.W.*, 1866, II: 311-2) as belonging to the genus *Selenopalpus* of the Oedemeridae do not belong to that family but are almost certainly Lagriids. Unfortunately both types are unique. I believe *S. mastersi* to be close to, if not identical with, *Ictistygna fasciata* Champ. McKeown writes that it fits Champion's description very well and could quite easily be the same species. *S. fuscus* is almost certainly an *Egestriomima*, but, having not seen the type since studying the genus, I am unable to place it in the key given above. Specimens of the other species of *Egestriomima* were submitted, for comparison, to McKeown, who writes that none of them are close enough in his opinion. It is hoped to clear this matter up later.

Family PEDILIDAE.

Key to Australian Genera.

1. Upper surface tuberculate, eyes very prominent. (Neck not at all visible from above.)
..... *Anaplopus* Blackb.
Not as above 2
2. Neck very narrow; maxillary palpi serrate. (Last 3 joints of antennae longer and wider than those preceding.) *Macratris* Newm.
Neck comparatively wide; maxillary palpi not serrate 3
3. Terminal joint of maxillary palpi securiform. (Upper surface very coarsely punctate; terminal joint of ♂ antennae elongate.) **Diacalla* Pasc.
Terminal joint of maxillary palpi cultriform. (Upper surface more finely punctate; terminal joint of ♂ antennae elongate, except in *E. suturalis* Pasc.) *Egestria* Pasc.
Terminal joint of maxillary palpi oblong, subtriangular. (Terminal joint of ♂ antennae ovate.) *Egestrina* Champ.
Terminal joint of maxillary palpi ovate. (♂ with post tibiae prominently armed on inner margins.) *Macratrimima* Champ.

Genus EGESTRIA Pascoe.

Champion (*Trans. Ent. Soc. Lond.*, 1916, 194-5) only recognized two species, *E. suturalis* Pasc. and *E. taeniata* Pasc., of this genus, placing *E. griseolineata* Fair. and *E. pallitibra* Fair. as synonyms of the latter. In case of *griseolineata* I believe he was mistaken.

Four species are represented in the material before me, including one, of which I have taken numerous specimens in the Bogan R. district of N.S.W., that agrees very well with Fairmair's brief description of *E. griseoliniata*. It differs from *E. taeniata*

* Unknown to me in nature but must be very close to *Egestria*.

Pasc. *inter alia*, in having noticeably stouter antennae and tarsi, the former noticeably serrate in the ♂. It is not so dark, less shining and more heavily clothed. A long series of *E. taeniata* from the same locality, agrees with Pascoe's description in the case of the female while the male is evidently the insect on which Fairmair's description of *E. pallitibra* was based. They have some noticeable long black hairs at the basal angles of the head. The fourth species appears to be new and is described hereunder.

The four species may be tabulated thus:

1. Apical joint of antennae not elongate in either sex; elytra with white pubescence densest at suture *suturalis* Pasc.
Apical joint of antennae at least as long as the two preceding; pale pubescence forming a more or less distinct vitta on each elytron 2
2. Antennae and tarsi stouter, the former serrate in ♂; elytral markings well defined
..... *griseoliniata* Fairm.
Antennae and tarsi slender, the former filiform in both sexes; elytral markings not so definite 3
3. Apical joint of antennae as long as three preceding in ♂ and as two preceding in ♀
..... *taeniata* Pasc.
Apical joint of antennae longer than the six preceding in ♂ and as long as the five preceding in ♀ *antennalis*, n. sp.

EGESTRIA ANTENNALIS, n. sp.

♂. Elongate, black, elytra and second, third and fourth abdominal sternites ferrugino-testaceous, tibiae, tarsi and joints 3 to 10 of antennae ferrugineous; clothed with pale semi-erect pubescence, becoming testaceous on head and sides and apex of elytra, each elytron with a wide oblique vitta from shoulder to suture just in front of apex (as in *E. taeniata*) of griseus more depressed pubescence.

Head transverse, moderately and confluent punctate. Pronotum elongate, expanded a little before middle, not quite as wide as head, finely and closely punctate with a medial line traceable from base to neck. Scutellum densely pubescent. Elytra wider than prothorax, twice as wide as base thereof, shoulders rounded, sides thence gradually narrowing towards apex, this evenly rounded, not so closely nor so finely punctate as pronotum. Antennae, joint 2 shorter than 1, 3 and 4 almost twice as long as 2, 5 to 10 becoming progressively shorter, 11 subcylindrical, slightly bent at middle, and longer than preceding six together.

Size: 9 mm. × 2.25 mm.

♀. Darker. Elytra fuscopiceous, sides parallel. Abdominal sternites dark. Antennae with terminal joint thinner from middle to apex and as long as preceding five together.

Size: 11 mm. × 3 mm.

Hab.—South Queensland, Milmerran (J. Macqueen).

Holotype and allotype in the Australian Museum, paratype in the C.S.I.R. Coll.

Three specimens, including the sexes, taken during December, 1926, represent a species that is very similar to *E. taeniata* but is at once distinguished from that species by the longer terminal joint of the antennae in both sexes. The antennae are not quite so slender; its form is rather more robust and the punctures of the pronotum are finer and closer. As mentioned previously, the ♂ of Pascoe's species has black hairs on the head.

MACROTRIOMINA LOBIGERA Champ.

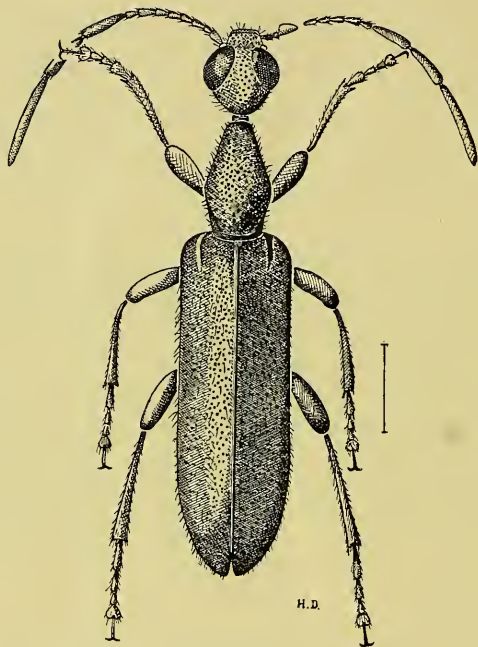
Trans. Ent. Soc. Lond., 1916, 167.

Five specimens, two from N.S.W. and three from Western Australia, cannot be sufficiently differentiated from the description of this species to be regarded as distinct, though the posterior tibiae are less strongly curved than in Champion's figure. The colour of the legs is variable, being red in two New South Wales and one Western Australian specimen and darker, almost black, in the other two Western Australian specimens with the exception of the anterior tibiae. The clothing is stramineous on the New South Wales specimens and griseus on those from Western Australia. The species was described from New Guinea.

MACRATRIA DAVIDSONAE, n. sp. Text-fig. 1.

Elongate, uniformly castaneous, nitid, rather sparsely clothed with depressed golden pubescence, becoming thicker at the tibiae and tarsi, and with occasional longer, fine, erect setae.

Head slightly longer than wide with two shallow depressions between base of eyes connecting with a short sulcus at base, finely and closely punctate; eyes large. Antennae long, about half length of insect, slender, joints 9 to 11 thicker cylindrical, 9 and 10 each as long as 6 and 8 combined, 11 not quite as long as 9 and 10 combined. Prothorax very long, three-fifths as wide as long, not quite as wide as head, widening to just



Text-fig. 1.—*Macratría davidsonae*, n. sp.

before middle then narrowing uniformly to apex, disc subconvex, fairly closely and finely punctate. Elytra three times as long as wide, slightly over half as wide again as prothorax, almost parallel sided, very slightly narrowed hindwards, suture raised after basal fourth, a small elongate basal depression inside each shoulder, closely and finely punctate, punctures becoming still finer towards apex and are not at all linear in disposition (they are closer than indicated in the figure). First joint of anterior tarsi enlarged, about as wide as the tibia and as long as the two following joints combined, densely pubescent beneath.

Size: 9 mm. × 2 mm.

Hab.—N.S.W., Acacia Plateau (Davidson).

Type unique in the author's coll.

This very large species, of which there is a single example before me, does not come near any Australian species known to me or of which I have seen the description. It is to be noted that I have not seen the descriptions of Pic's two Australian species *M. bangaasi* and *M. pallidiceps*, which are not available in this country. Champion (*Trans. Ent. Soc. Lond.*, 1916, 201) mentions the enlarged basal joint of the anterior tarsi as a character to be found in certain tropical American forms. I have to thank my friend H. J. Davidson for permission to describe this insect and also for the accompanying figure. It is named after Mrs. Davidson, whose ability as a collector led to its capture.

SECTION 2.

Some miscellaneous notes on species of various families.

Family CUPIDAE.

OMMA MASTERSI Macl.

Trans. Ent. Soc. N.S.W., II, 1866, 169.

A fine example of this species, taken on the bank of the Bogan River between Nyngan and Dandaloo, N.S.W., indicates that, though rare in collections (the only other specimen known to me, is the type from Gayndah, Q.), the species is widespread. The black and white scales are so arranged as to give a striking resemblance to the female of one of the commoner species of Mutillid wasps.

Family COLYDIIDAE.

NEOTRICHUS ACANTHACOLLIS C. and Z.

PROC. LINN. SOC. N.S.W., lxii, 1937, 195, Pl. ix, fig. 15.

A series of specimens of this beetle was taken by me, at the end of December, 1945, on a species of *Loranthus* (mistletoe) growing on "stringy-bark" (*Eucalyptus* sp.) at Inverell, N.S.W. The beetles were confined to the mistletoe, occurring on a number of different plants, so may breed in the dead twigs. Mr. McKeown, of the Australian Museum, kindly compared specimens with the unique type which is abraded. Fresh specimens are clothed with broad, short, depressed scales, interspersed with groups of darker, erect, stout, blunt hairs, the latter disposed principally along the pronotal prominences, in tufts on the elytra and as a tuft over each eye, with a lighter coloured row in the vicinity of the clypeal suture. The flat scales are cinerous fulvous and brown, and form a complicated pattern, but are almost entirely fulvous on the sides of the prothorax.

Family BOSTRYCHIDAE.

XYLABOSCA LEAI Lesne.

Ann. Soc. Ent. Fr., 1900, 570.

Lea (*PROC. LINN. SOC. N.S.W.*, xxxvi, 1911, 474) places this species as a synonym of *X. bispinosa* Macl. without giving any reason. I have seen several specimens, including one identified by Lea himself, that are quite evidently distinct from *X. bispinosa* by reason of the fringe of long hairs on the head and the front of the pronotum being distinctly concave when viewed from above. There is a specimen in the Tasmanian Museum that appears to be the ♂ of this species. It has the above-mentioned characters in addition to which the elytra are shorter and the apical declivity more abruptly flattened than in *X. bispinosa*. The two apical spines are longer and more slender and for the first half of their length they are almost parallel, then rapidly diverge so as finally to be almost at right angles.

XYLABOSCA HIRTICOLLIS Blackb.

Trans. Roy. Soc. S.A., 1897, 92.

This species, described from Western Australia, extends to New South Wales. An example was recently taken by me on the Bogan River above Nyngan.

Family BYRRHIDAE.

BYRRHINUS PUBIVENTRIS Lea.

Rec. S. Aust. Mus., 1920, i, 277.

Seven specimens, evidently part of the original series taken by Helms on the Upper Ord River, N.W. Australia, submitted to me for identification by Mr. Scott of the Western Australian Department of Agriculture, have the upper surface pubescent except where it is obviously abraded. Two specimens are almost completely clothed. When he described the upper surface as glabrous, Lea was deceived by the uniform abrasion of the three specimens in the type series.

Family HISTERIDAE (Species wrongly included in Corylophidae).

Acritus sternalis Lea = *Ittrion prosternalis* Deane, n. syn.

Examination of a series of *Ittrion prosternalis* Deane (including a cotype), which was referred by its author to the Corylophidae, has convinced me that the insect belongs to the Histeridae. It was described and figured (Proc. Linn. Soc. N.S.W., 1932, 334) from material collected by myself. A comparison with the description of *Acritus sternalis* Lea (*Trans. Ent. Soc. Lond.*, 1925, 262) leaves little doubt that it is synonymous with that species. In Deane's figure the tarsi appear to be four-segmented, but this is the case only with the hind pair. Under the microscope, using a fairly high power, the 10th and 11th antennal joints can be perceived in the compact club.

Family BUPRESTIDAE.

NEOBUPRESTIS TRISULCATA Cart.

Proc. Linn. Soc. N.S.W., lvii, 1932, 102.

My collection contains a pair of this species, taken within a mile of the type locality. The description was based on a single ♀ which was stated to be glabrous. In fresh examples this is not so, as the pronotal sulci have the punctures filled with a white meal, which is also present on the head and in spots on the elytra placed in a basal, medial, and sub-apical zone and as a double post-medial spot on either side of the suture.

The ♂ is similar to the ♀ except that the legs are much stouter, especially the medial pair, in which the tibia is thickened to approximately the same size as the femur. It is much smaller.

Size: 11.5 × 4 mm.

Allotype ♂ in the author's collection.

HYPOCISSEIS ORNATA Cart.

Proc. Linn. Soc. N.S.W., xlviii, 1923, 175.

In December, 1945, about 20 specimens of this species were taken by me on a species of *Loranthus* (mistletoe) growing on "stringy-bark" (*Eucalyptus* sp.) near Inverell, N.S.W. A pair were also taken some years ago from another species of *Loranthus* on the Bogan River, N.S.W.

CASTLARINA BOGANIA Cart.

Proc. Linn. Soc. N.S.W., lv, 1930, 534.

Since this species was described, a number of specimens have been taken every year, during November, on the flowers of *Myoporum platycarpum*; only very rarely on other flowers out at the same time. My thanks are due to Mr. R. H. Anderson, of the Botanic Gardens, Sydney, for the botanical name.
